

## Tailings transportation management. An essential paradigm shift.

**Countries who are benefiting from reducing carbon emissions are those acting on climate change imperatives. However, if investment exceeds return, we might see those countries politely decline the opportunity to participate.**

Tailings transport and management in underdeveloped countries and isolated sites will worst case, store cyanide and arsenic contaminated water, copper sulphate and toxic coal ash in slurry dams with barriers constructed from a combination of landscape features and tailings. Return exceeds investment, therefore it's acceptable. Risk is different.

Between 2008 and 2019 there have been 32 major dam failings, hundreds of deaths, villages wiped out, ecosystems and industry annihilated, water supplies poisoned for years.

So, we continue to build more. Mostly in underdeveloped economies.

I visit Porgera mine in PNG several times a year for work. Each time, I'm struck by PNG's raw natural beauty and no two trips are ever the same. Each time, I'm reminded of how fragile this economy, ecosystem and community is. I frequently ask myself the question - "who's responsible for warranting tailings dam safety"?

Not just in PNG, but any country where the potential exists to come up with "creative" solutions that might or might not enhance the positions of all stakeholders.

We are privileged to be given access to some of these magnificent countries to partner with them in developing their valuable minerals in return for improvements in growth, education, training, investment and jobs - yet a legacy of dangerous waste and unstable tailings storage facilities remains - potential tsunamis of toxic by-product.

**All care, no responsibility?**



## Tailings dam safety can be improved

Albert Einstein posited “we cannot solve our problems with the same thinking we used when we created them”. Instead we need to step back and interrogate every detail, every decision, every ecosystem and economy. We cannot make utilitarian decisions just because we have been granted access and license. We must consult with owners and respect a holistic approach. We must observe the heritage and history of these countries and states. Rather than scar their landscape - we must aim to enhance and respect the natural beauty of the landscape, the heritage of our hosts and become part of their cultural richness and diversity.

## In the beginning...

The data is in. We must fully open our intentions to our hosts and listen to their concerns. We must work in partnership to achieve maximum transparency. There is ample evidence, technology and systems available right now to either avoid the use of tailings dams completely or at the very least, improve their safety well beyond any chance of catastrophic failure. The saving of lives and communities should, at a minimum, be all the incentive that we require.

Putzmeister pumps can reduce or possibly eliminate the need for tailings dams by pumping treated paste and thickened tailings as opposed to water based slurry. But pumping paste is a specialised technology

that requires precision in the manufacture of pumps to enable them to be powerful and enduring enough to pump over long distances with absolute minimal down time.

This precision is not just constrained to pumping technology but embraces all aspects of the consultative conversation from inception and design to installation, commissioning, and ongoing support.

What would it look like if we all went to similar extremes of precision to protect and enhance our hosts countries? If we all worked toward a unified cause greater than any individual stakeholder?

What would it look like if we acted holistically and honestly? From full and transparent engagement in the initial encounter to open and honest appraisal at the completion - from turning the first sod of earth to placing that last sapling into the restored virgin ground after rehabilitation?

These questions and others of a similar nature are at the forefront of Putzmeister’s approach to delivering sustainable, innovative, and comprehensive solutions for tailings transportation.

**Putzmeister - saving the world - one pump at a time.**

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